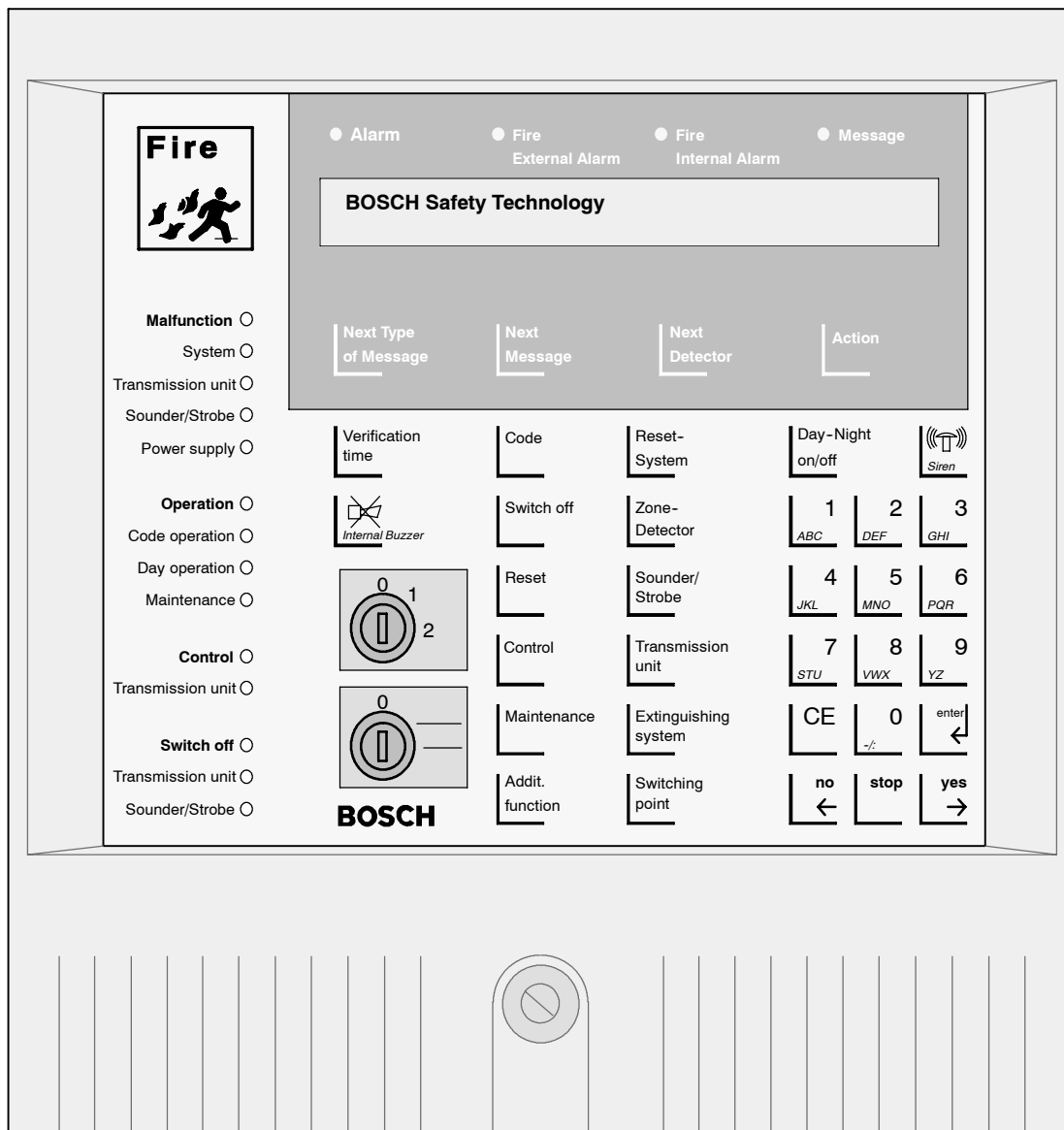


INSTALLATION MANUAL

Operating Unit BE 500



BOSCH

BDL-4998100589
A1.en/ 06.12.2000
ST-FIR/ PRM1 / deh

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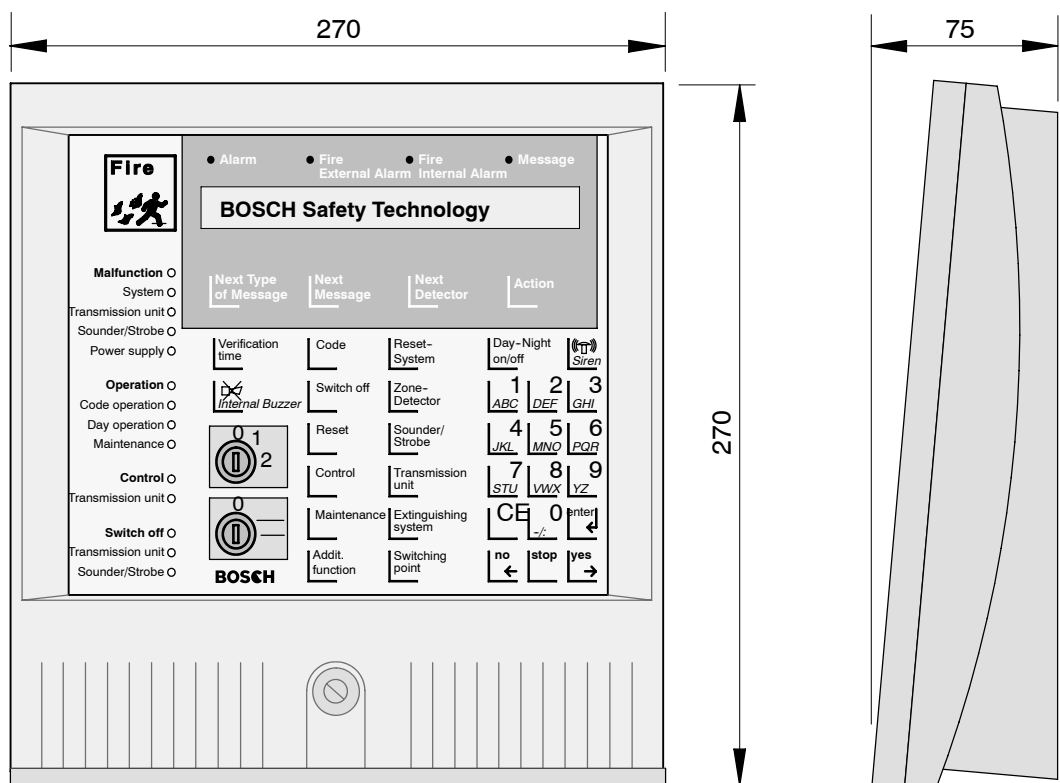


1. Installation

1.1. Installation notes

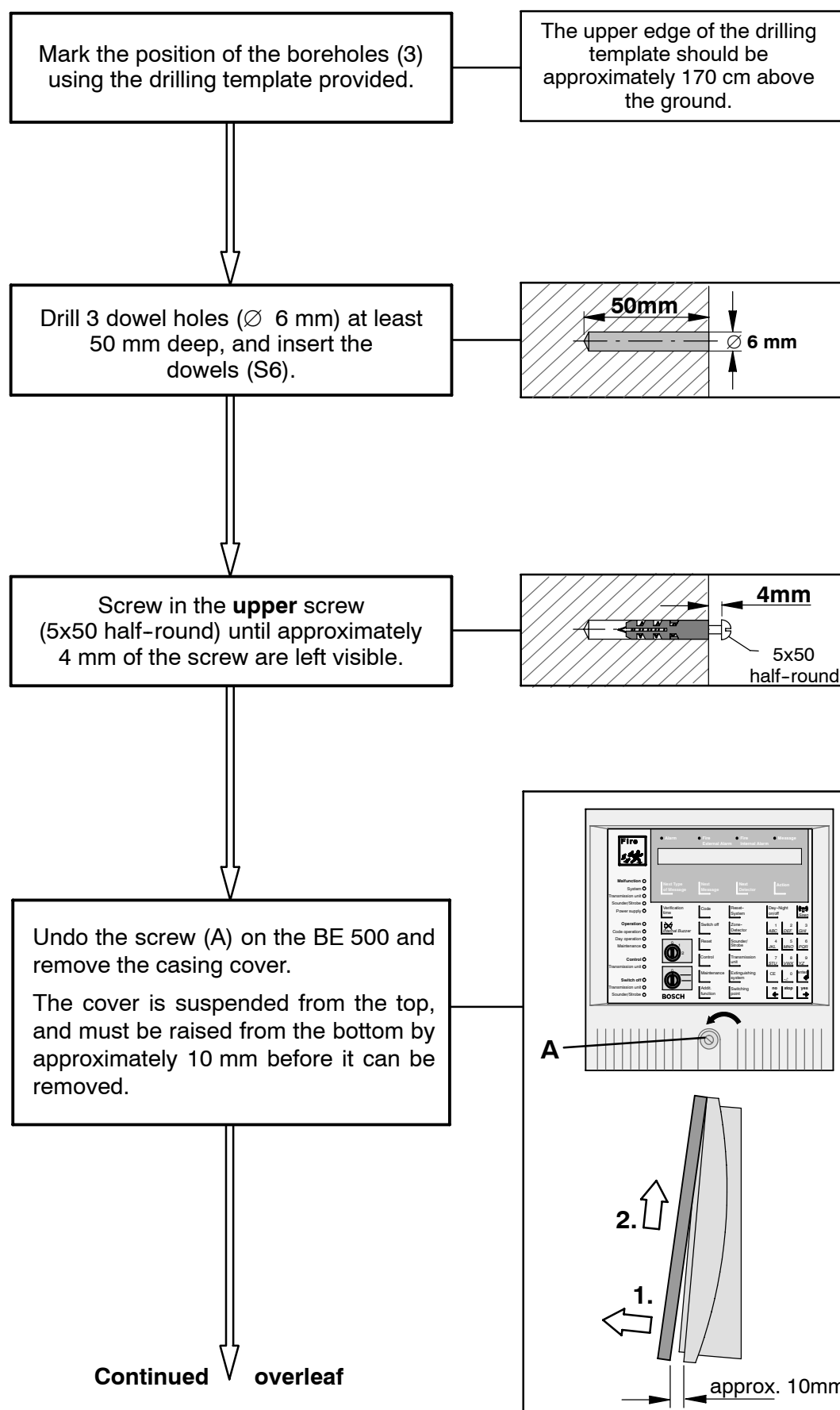
- Only install the equipment in dry, attended interior rooms.
Ambient conditions should be taken into account (see page 18).
- Operating control and display elements must be positioned at eye level.
- Only use the installation material recommended by UC-ST, otherwise it will not be possible to guarantee against interference.
- Do not operate devices which have condensation on them.
- Push a ferrite sleeve on the NYM 3x1.5 power cable (230 V).
- Clip a flap ferrite onto the data cable.
- Observe the usual precautionary measures for CMOS technology when handling printed circuit boards.
- **Caution ESD (electrostatic discharge)**
Ensure that the usual measures and instructions with regard to electrostatic discharge are observed.
- Observe any electrical connection conditions currently enforced by local authorities (fire service).
- If a BAT 100 LSN remote display panel is mounted in addition to the BE 500 as an LED individual display detector group, it should be fitted casing to casing with the BE 500.

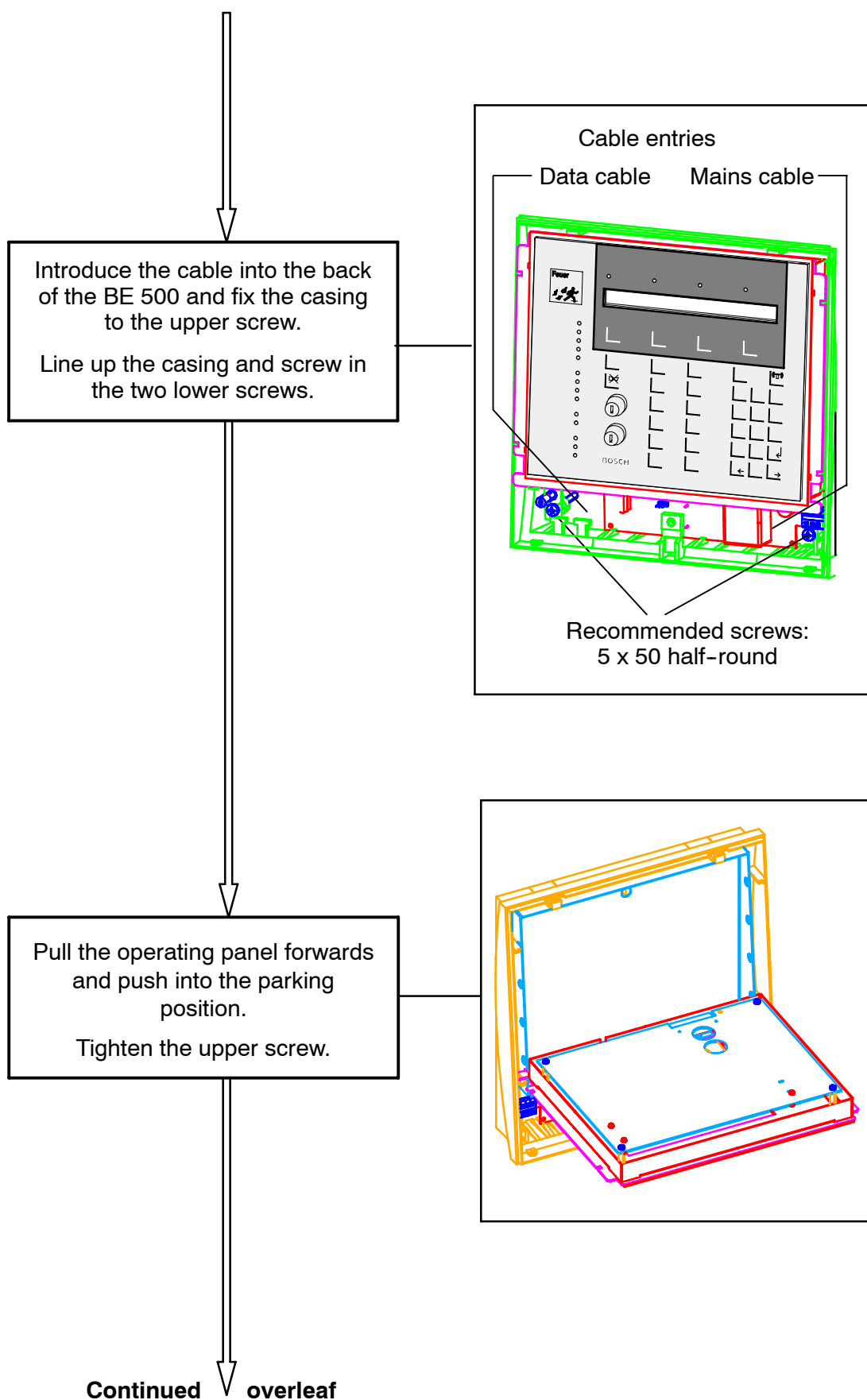
1.2. Dimensions



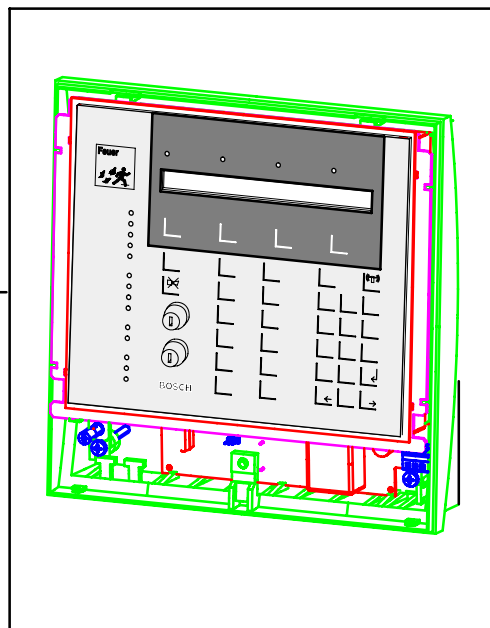
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1.3. Installation instructions



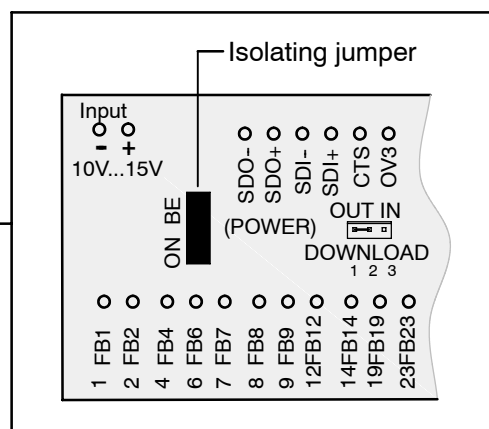


Pull the operating panel out of the parking position and push it back into the casing.



Caution, ESD, (electrostatic discharge)
Ensure that the usual measures and instructions with regard to electrostatic discharge are observed.

Remove system voltage isolating jumper from the connections board.

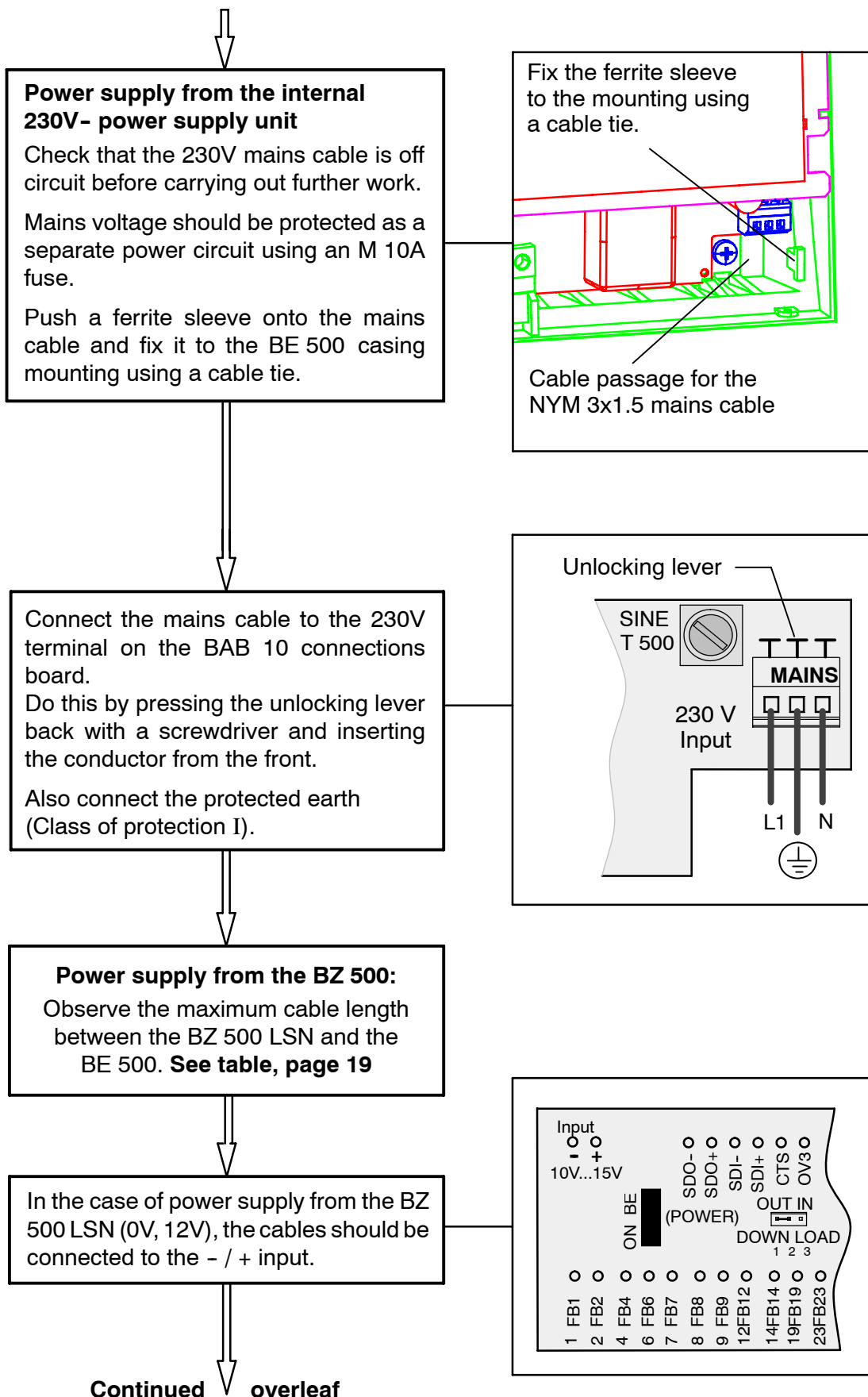


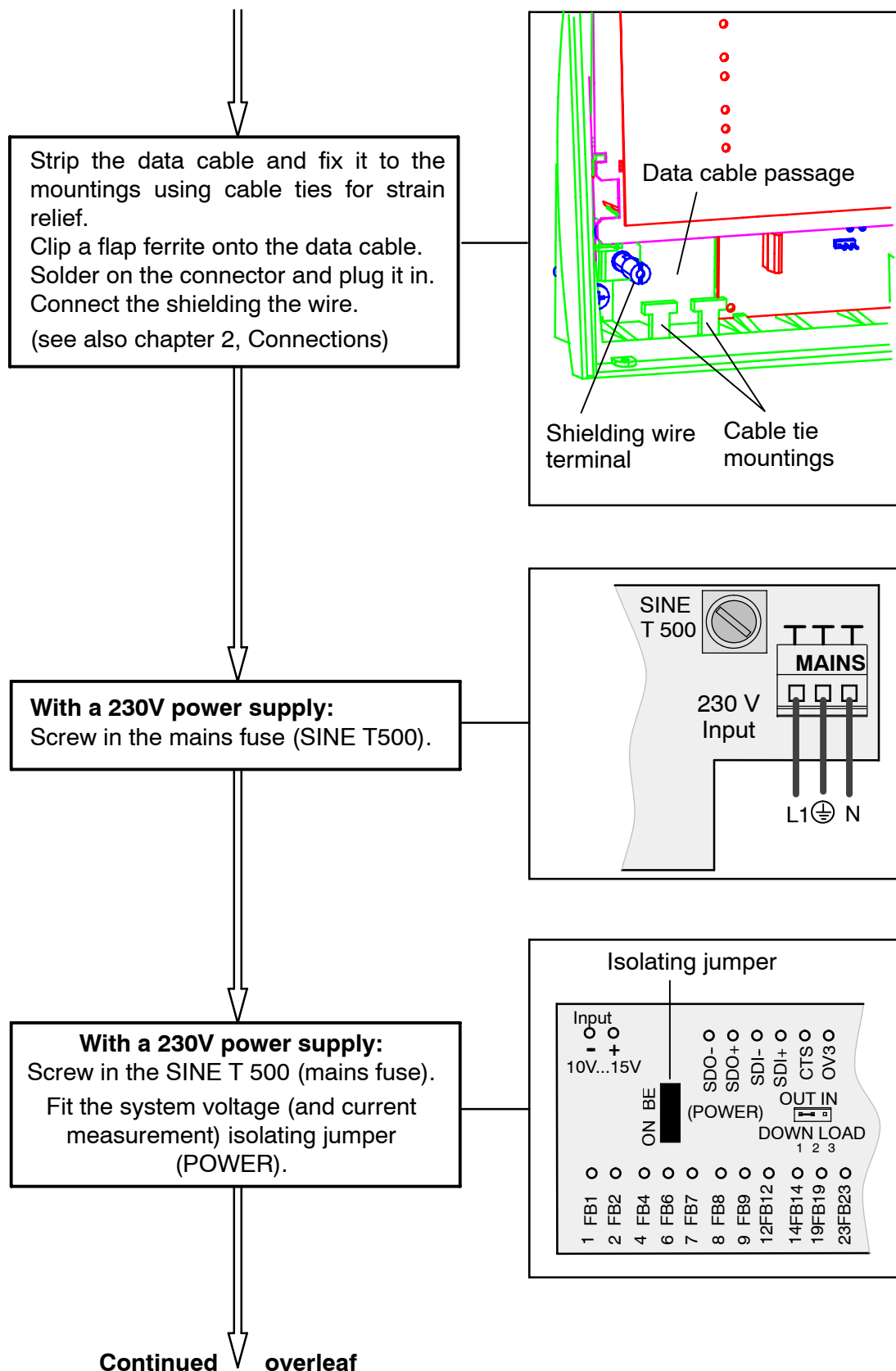
Power supply:

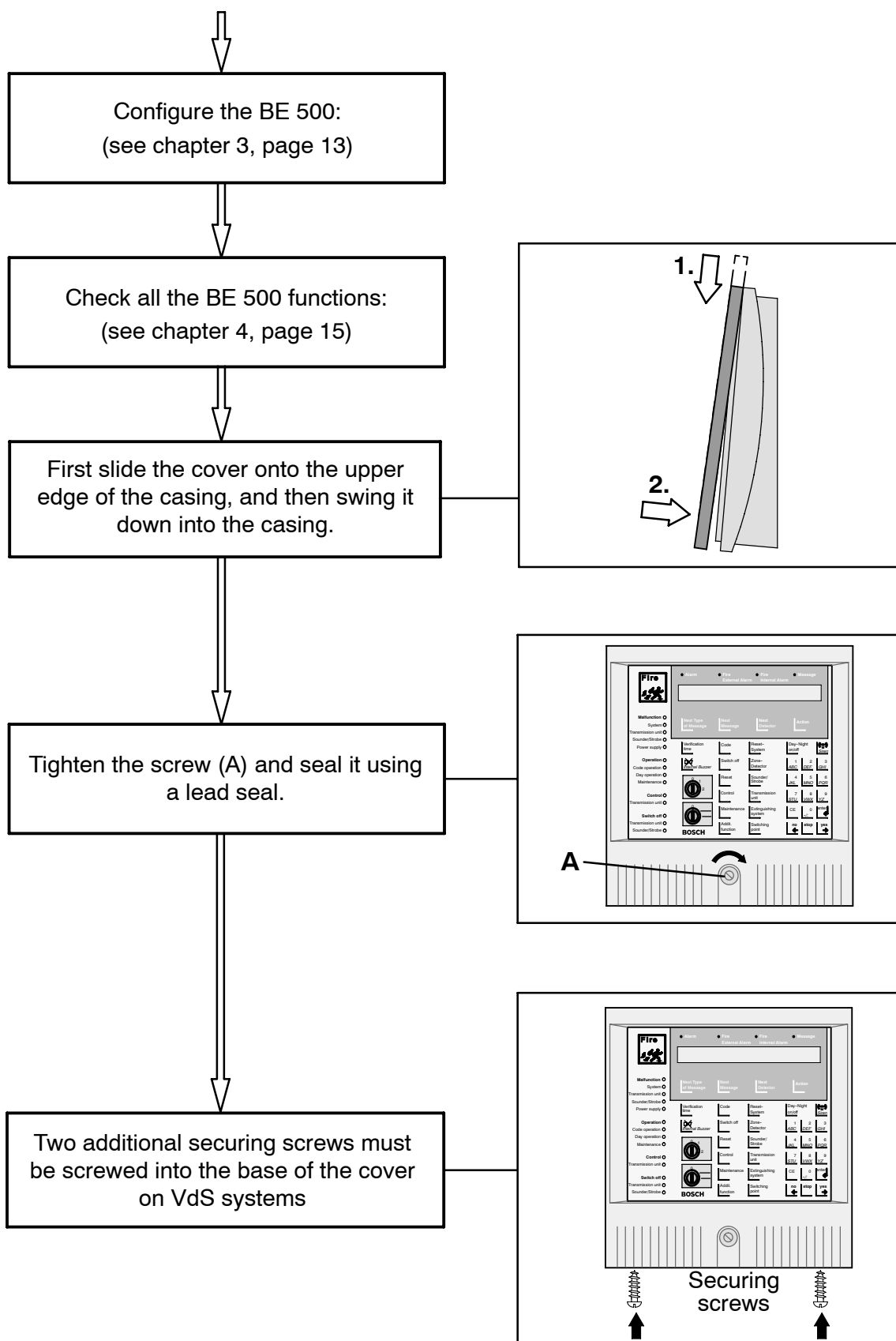
The power is supplied either from the BZ 500 LSN (0V, 12V) or from the BAB 10 internal power supply unit.

Continued overleaf



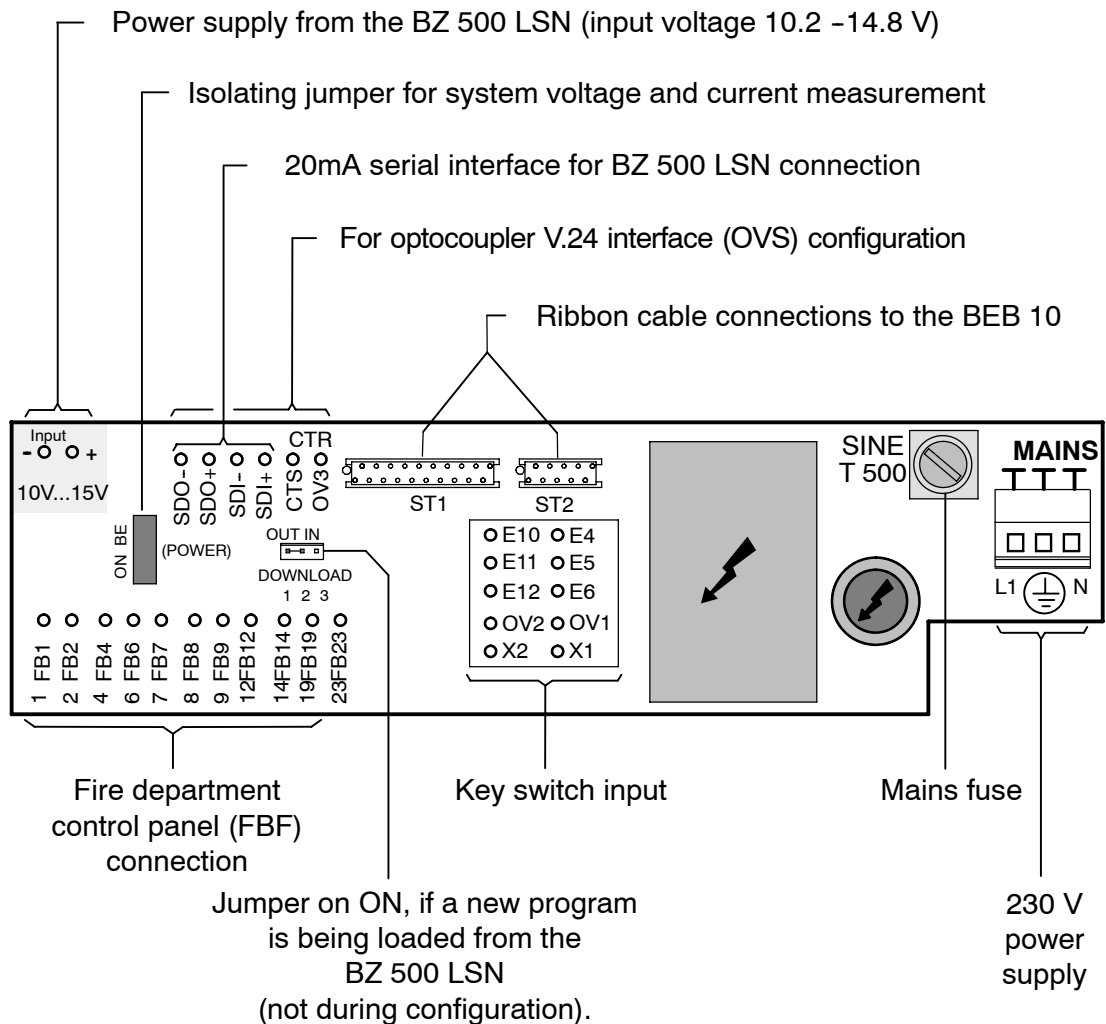




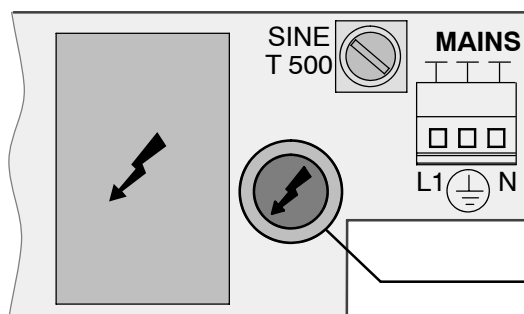


2. Connections

2.1. Connection PCB BAB 10



Caution



Caution, high-voltage

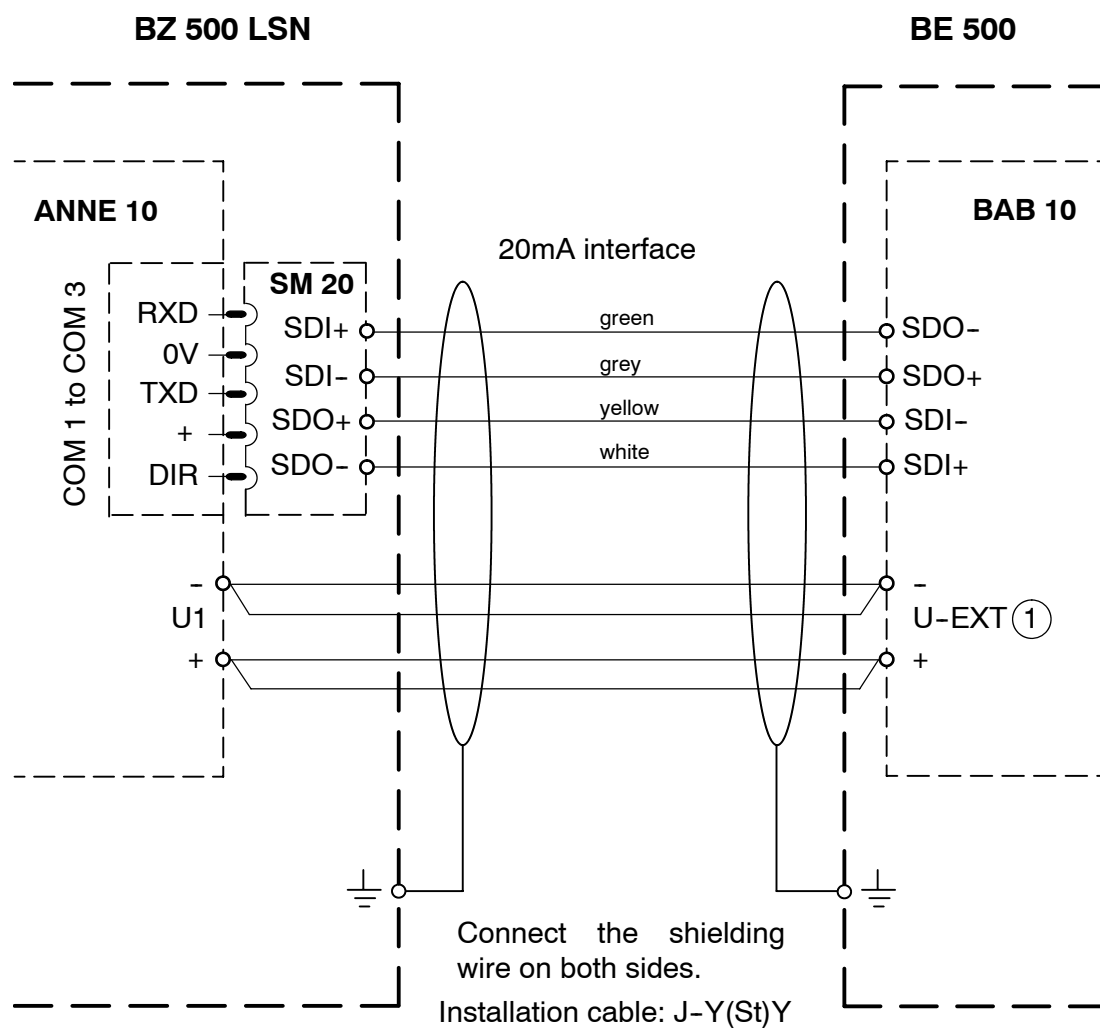
The capacitor bonding on the BAB 10 connections board must not be removed.

2.2. Description of terminals on the BAB 10

Terminal	In (I) Out(O)	Function
Fire department control panel FBF		
FB 23	I	for FBF: switch off the ÜE button
FB 19	I	for FBF: trigger (check) the ÜE button
FB 14	I	Voltage supply +12V
FB 12	O	for FBF: ÜE triggered display
FB 9	O	for FBF: Alarm generator display switched off
FB 8	O	for FBF: reset control unit display
FB 7	O	for FBF: ÜE display switched off
FB 6	I	for FBF: Buzzer off button
FB 4	I	for FBF: Alarm generator off button
FB 2	I	for FBF: Control unit reset button
FB 1	I	0V voltage supply
Key switches		
E4, E5, E6, OV2, X1	I	Key switch 2
E10, E11, E12, OV1, X2	I	Key switch 1
Mains		
L1	I	Phase
N	I	Neutral conductor
	I	Protected earth



2.3. Connection of BE 500 to the BZ 500 LSN



- ① Only connect U-EXT if the BE 500 is being supplied with power from the BZ 500 LSN.

3. Configuration

3.1. Configuration via BZ 500 LSN

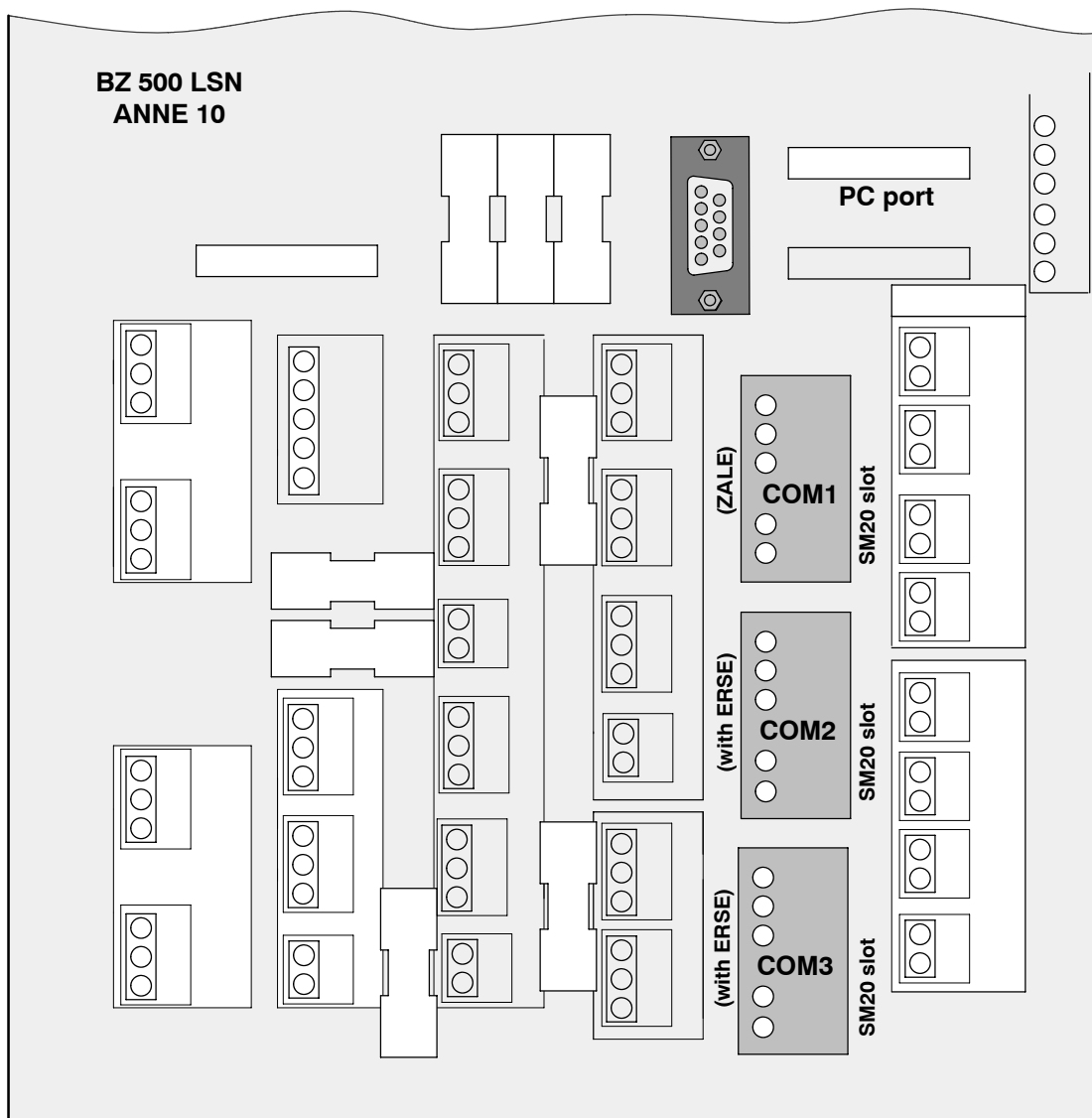
BE 500 configuration must take place via OVS if the BE 500 is connected to the BZ 500 LSN COM 1 interface (see overleaf).

Configuration can be carried out directly via the BZ 500 LSN (or via OVS) if the BE 500 is connected to COM 2 and COM 3.

The interface expansion unit, ERSE 10, must be installed in the BZ 500 LSN for the COM 2 and COM 3 interfaces.

Before the PC/laptop is connected to the PC terminal, any SM 20 interface module which may be connected to the BZ 500 LSNs' COM 1 interface must be removed.

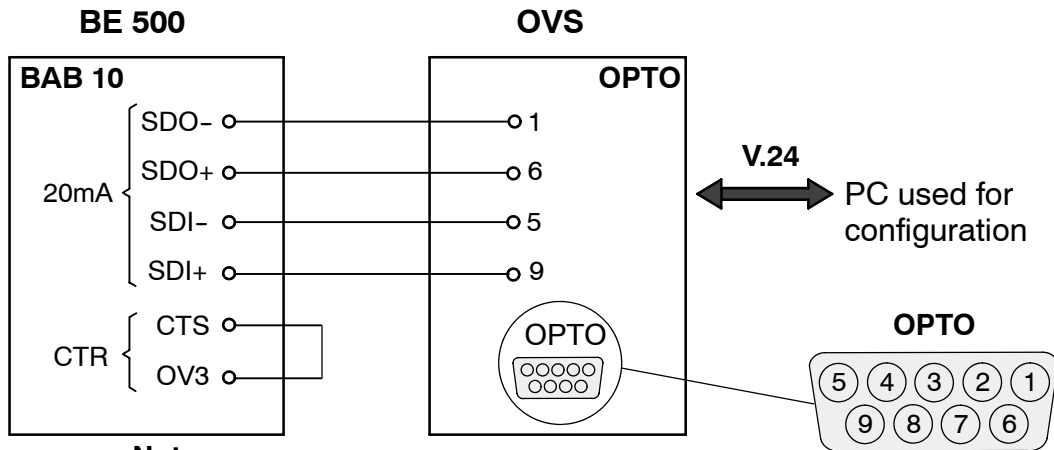
Deenergize the BZ 500 LSN before any action.



3.2. Configuration via OVS



If there is no ERSE fitted, the BE 500 must be configured via OVS (optocoupler V.24 interface), independently of the BZ 500.



Notes:

- Jumper assignment: Set OVS jumpers BR1 and BR2 to 1/2.
- The numbers correspond to SUB-D (9-pin) connector pin assignment.

3.3. Configuration notes

The BE 500 is configured from a PC or laptop using the configuration program Win PARA. A PC or laptop with at least 4 MB RAM, and Windows version 3.1 or later is required for this.

Configuration steps:

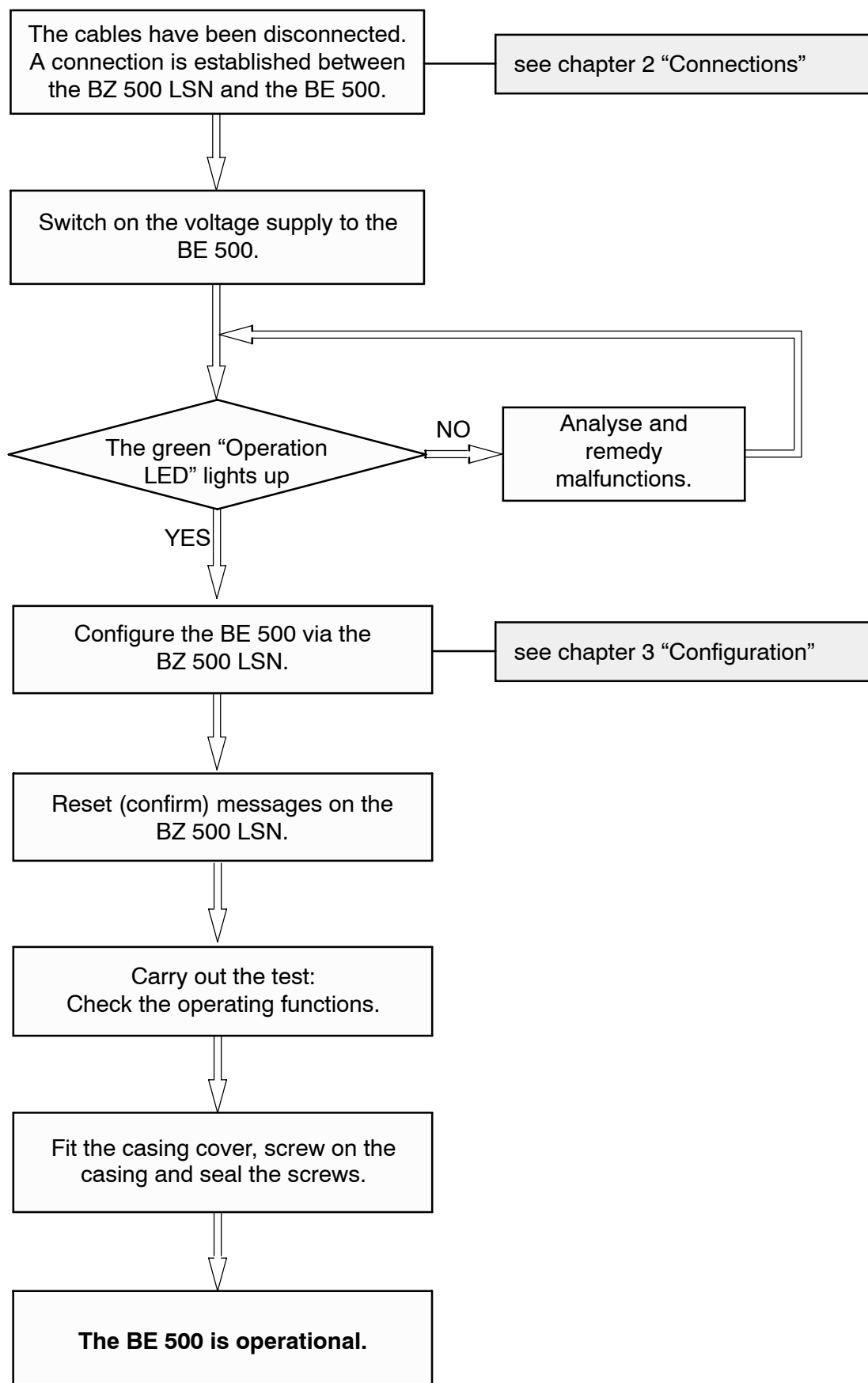
1. Call up the configuration data for the BZ 500 LSN from the >WinPARA> program.
2. Call up the CONTROL PANEL menu.
3. Enter BE 500.
4. Enter any key switches and set their configuration data.
5. Assign interfaces to the BE 500 as follows:
 - Interfaces
 - Central interface
 - Interface 1
 - ERSE interface expansion
 - Interface 2
 - Interface 3

Call up "Interfaces 1 to 3" and enter the BE 500 control panel under "device connected".

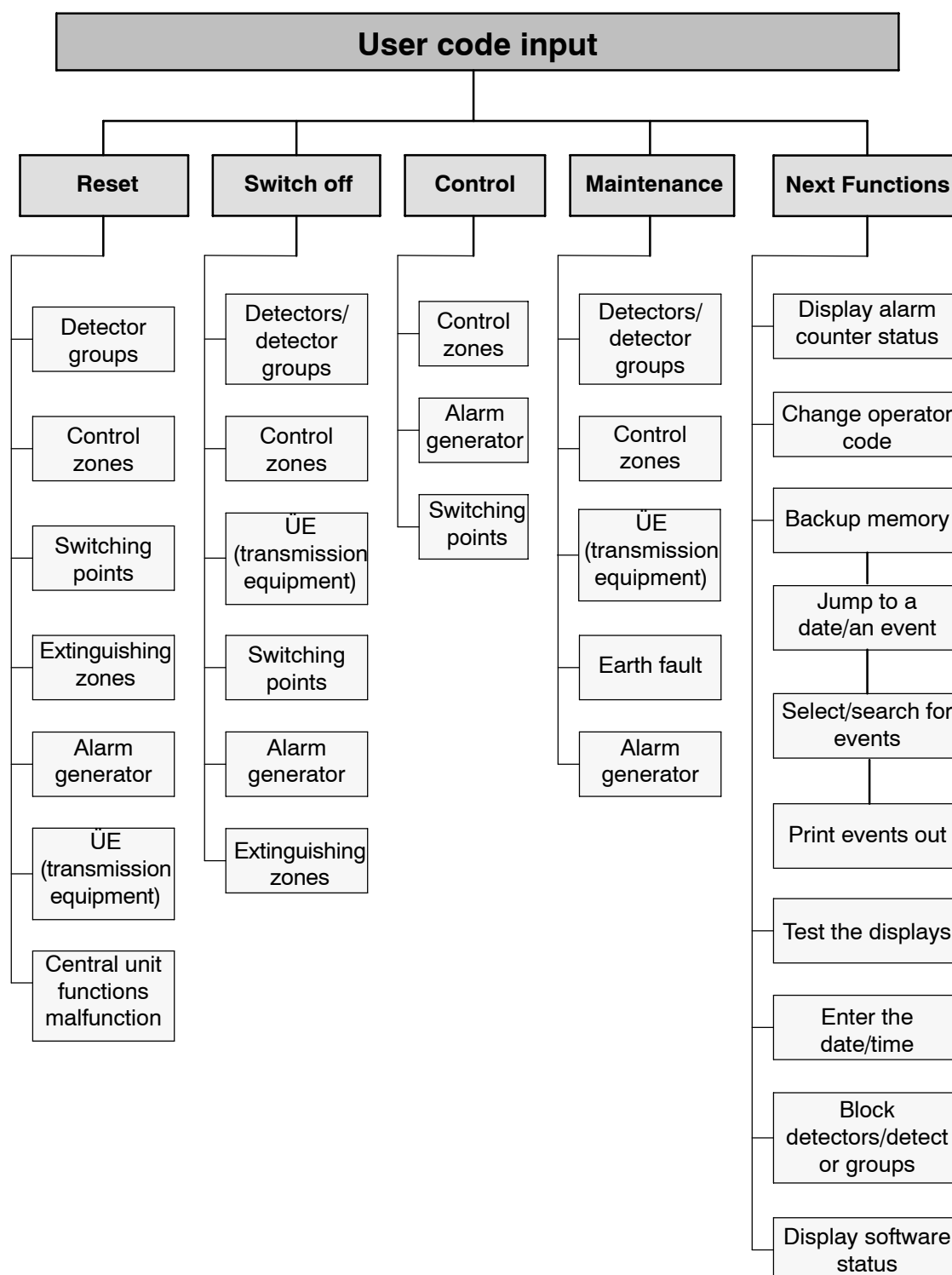
6. Load the configuration data to the system (BZ 500 LSN) or to the individual BE 500.
7. It is essential to backup the data after successful configuration.
(from the BZ 500 LSN disk).



4. Commissioning



4.1. Overview of menu structure and operating functions



📖 See also the BZ 500 LSN / BE 500 user manual

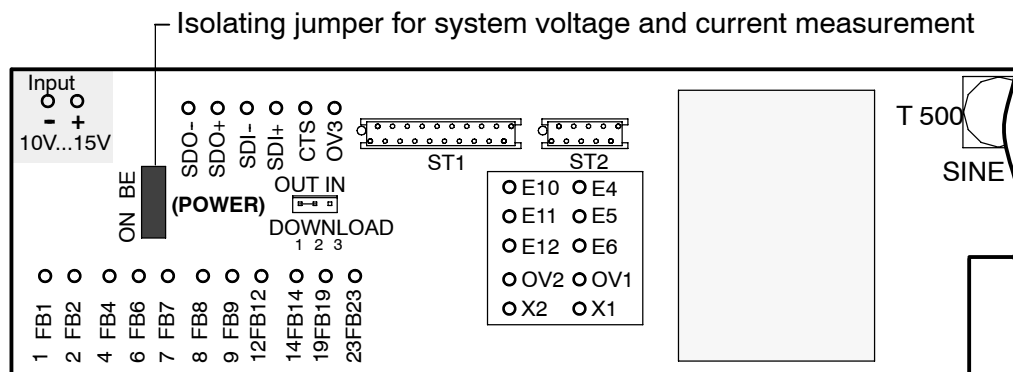
5. Notes on maintenance and service

Maintenance and inspection procedures must be carried out by appropriately qualified staff at the intervals specified.

VDE 0833 specifications are additionally valid for all work of this kind.

System power measuring points

The system current can be measured on the BAB 10 connections board. Remove the jumper (POWER) fitted in the factory and connect a current measuring device to the two Stoko pins.



5.1. Documents

Item number	LE*	Designation
3.002.219.470	1	BZ 500 LSN / BE 500 operating instructions
3.002.218.156	1	AHB EMZ / fire detection system control unit connection manual

* LE = Delivery item



For those with access authorization, on the Bosch ST ExtraNet at **www.boschsecurity.com/emea/fire** the current information for each product, as well as the installation instructions supplied with the device, are available for download as a PDF file.

5.2. Replacement and disposal

Printed boards and batteries which are faulty and can no longer be repaired must be disposed of correctly.



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6. Technical data

6.1. Standards and regulations

The BE 500 complies with the relevant European regulations and codes of practice for alarm receiving stations (GMA).

- VdS (certification number: **G 298054**)
- EN 54
- ISO
- DIN 14675
- VDE 0833
- EMC Directive 89/336/EEC
- Austrian standard

6.2. Dimensions/Weight/Colour

Dimensions (h x w x d): 270 x 270 x 75 mm

Weight: approx. 2.3 kg

Colour of casing: light grey

Colour of cover: light grey

Colour of control panel: white grey

6.3. Environmental conditions

Environmental protection class II (EN 54/2)

Degree of protection IP 30 (EN 60529/DIN VDE 0470, part 1)

Class of protection I (EN 60950/DIN VDE 0106, part 1)

EMC noise emission, EN 50081-1

EMC noise immunity, EN 50130-4

Ambient temperature 268 K ... 318 K (-5°C ... +45°C)

Storage temperature 253 K ... 333 K (-20°C ... +60°C)

6.4. Serial interfaces

Interface: 20 mA (optocoupler interface)

Transmission speed:

- with ZALE 10 (BZ 500 LSN): 9600 bit/s
- with ERSE 10 (BZ 500 LSN): 19200 bit/s

Installation cable: J-Y (ST) Y 2 x 2 x 0.6

6.5. Display time

Malfunction signal display time: 1 hour (buzzer)



6.6. Power supply

6.6.1. 230 V mains

Mains voltage: 230 V ~ (-15% ... +10%)

Mains connection cable: NYM 3 x 1.5 mm²

Mains frequency: 50 Hz

Mains voltage fuse protection: M 10 A

Mains fuse (SINE): T 500

Primary transformer (230 V): 14 V/ 0.5 A

Power consumption: 5 W (230 V), full system

Protection class: I

6.6.2. Power supply from the BZ 500 LSN

Input voltage U_{Extern} 10.2 V ... 14.8 V

Power consumption with an input voltage of U_{Extern} 14.8 V	
Off-load current without FBF	65 mA
Off-load current with FBF	75 mA
Alarm power (including display lighting)	120 mA
Alarm power (including display lighting and FBF)	140 mA

6.7. Maximum cable length between BZ 500 LSN and BE 500

6.7.1. For power supply from the BZ 500 LSN (0V, 12V)

BZ 500 output voltage: $U_{\text{BZ}} = 10.8 \text{ V (min.)}$ } permissible voltage drop
 BE 500 input voltage: $U_{\text{BE}} = 10.2 \text{ V (min.)}$ } $\leq 0.6 \text{ V}$

Conductor diameter / conductor cross-section	Maximum cable length without FBF	Maximum cable length with FBF
0.6 mm \varnothing	approximately 20 m	approximately 15 m
0.8 mm \varnothing	approximately 30 m	approximately 25 m
1.0 mm ²	approximately 50 m	approximately 35 m
1.4 mm ²	approximately 100 m	approximately 70 m

Cable resistance: $2 \times R_{\text{L}/2} \leq 1,5 \Omega$

6.7.2. For power supply from the internal power supply unit (230 V)

Maximum cable length: 1,000 m



7. Abbreviations

AHB	=	Connection handbook (A n s chalt e h a nd b uch)
ANNE	=	Connection PSU unit (A n s chalt u ng- N etzger a t- E inheit)
BAB 10	=	Operating panel connection (B edienfeld- A n s chalt u ng- B Z)
BAT 100	=	Operating and display panel (B edien- und A nzeigeteil T ableau)
BE 500	=	Operating unit (B ediene e inheit)
BEB 10	=	Operating panel electronic (B edienfeld- E lektronik- B Z)
BMZ	=	Central fire detection panel (B rand m elde z entrale)
DIN	=	German institute for standardization (D eutsches I nstitut für N ormung e.V.)
EMV	=	Electromagnetic compatability (E lektromagnetische V ertr ä glichkeit)
EN	=	European Standard (E uropa N orm)
ERSE	=	Interface expansion unit (E rweiterung- S chnittstellen- E inheit)
FBF	=	Fire department control panel (F eu e rweh r bedien f eld)
GMA	=	Security system panel (G efahren m elde a n l age)
ISO	=	International O rganisation for S tandardization
LED	=	L ight e mitting d iode (Leuchtdiode)
LSN	=	L ocal s ecurity n etwork (L okales S icherheits N etzwerk)
OVS	=	V.24 interface (O ptokoppler V .24 S chnittstelle)
PI	=	P roduct i nformation (P rodukt i nformation)
SM	=	Interface modules (S chnittstellen m odul)
ÜE	=	Transmission unit (Ü bertragung e inrichtung)
uP	=	Flush mounting (u nter P utz)
VDE	=	Association of German Electrical Engineers (V erband D eutscher E lektrotechniker e.V.)
VdS	=	German Association of Property Insurers (V erband d er S chadenversicherer Schadenverhütung GmbH)
ZALE	=	Control unit display LSN unit (Z entrale- A nzeige- L SN- E inheit)

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